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UETA AND E-SIGN:

AN OVERVIEW WITH ATTENTION TO CURRENT ISSUES

by Mark Moore

INTRODUCTION

During the mid-1990's, it became apparent that there was a need for statutory enactments addressing electronic contracting. As a general matter, lawyers understood an oral contract can made and enforced, subject to limits imposed by the statute of frauds.1

However, two areas of contract law could, it was believed, be clarified without causing excess controversy: electronic contract formation and the admissibility of electronic records as evidence in court. Out of this belief arose both a state and a federal response. Over 30 states have adopted some version of the Uniform Electronic Transactions Act ("UETA").2 California led the way in 1999, adopting a modified UETA as Sections 1633.1 to 1633.17 of the Civil Code. At the federal level, the Electronic Signatures in Global and National Commerce Act ("E-Sign") was passed by Congress and signed by the President on June 30, 1999.3

AN OVERVIEW OF CALIFORNIA'S UETA.

California's version of UETA became effective January 1, 2000. The operative provisions of California's UETA (or. "Cal ETA") are found at Civil Code Section 1633.7. Section 1633.7 is identical to Section 7 of the UETA as adopted by the

UETA represents the fruit of a two-year effort by NCCUSL to create a model uniform state

statute governing electronic contracting. UETA, as

adopted by NCCUSL, can be found at www.law.

upenn.edu/bll/ulc/fnact99/1990s/ueta99.htm.

Cal. Civ. Code 1622 and 1624.

National Conference of Commissioners on Uniform State Laws ("NCCUSL").4 Under Section 1633.7, four rules obtain:

- · First, a record or signature may not be denied legal effect or enforceability solely because it is in electronic form.
- Second, a contract may not be denied legal effect or enforceability solely because an electronic record was used in its formation.
- · Third, if a law requires a record to be in writing, an electronic record satisfies that law.
- Finally, if a law requires a signature, an electronic signature satisfies that law.

Note that Section 1633.7 is an "enabling" statute. It provides that the electronic nature of a contract, record or signature may not be used as a reason to deny the efficacy of the contract, signature or record. It, in effect, enables legal effect to be given free of doubt based solely on the medium (electronics) being used. But nothing in Section 1633.7 limits the manner in which an electronic contract, signature or record may be created or used.

ELECTRONIC CONTRACTS WITHOUT CAL ETA.

Thus, it is possible to give legal effect to an electronic contract without reference to Section 1633.7. Section 1633.7 does not. for example, say that an electronic contract must be formed in accordance with the terms of and must meet the requirements of Cal ETA as a condition to being given legal effect. The general rule, that a contract can be formed if there is a meeting of the minds and consideration is given, remains the law in California, subject to certain defenses such as the statute of frauds. Section 1633.7 does not place electronic contracts at a disadvantage. Rather, Section 1633.7 provides greater clarity by specifically stating that a contract's electronic nature cannot, in and of itself, be used as an argument that the contract is invalid or was not properly formed.

This interpretation of Section 1633.7 is consistent with the Comments to Section 7 of UETA as adopted by NCCUSL.5 It is also consistent with "click-through" and "browse-through" cases, in which courts have generally held (without reference to UETA) that an enforceable contract can arise in an electronic environment if a consumer "clicks through" a button indicating acceptance of the terms and conditions of an electronic copy of the contract.6

SPECIFIC INTERPRETIVE ISSUES UNDER CAL ETA: EXCLUDED TRANSACTIONS.

The importance of the "enabling" nature of Section 1633.7 becomes apparent when one considers several of the non-standard provisions in Cal ETA. When it was passed, California modified several provisions of the version of UETA that had been adopted and proposed for nationwide enactment by NCCUSL. The non-standard provisions of Cal ETA included, among other things, an expansion of the types of agreements that would not be covered by Cal ETA and restrictive requirements for consent to the use of electronic contracts.

The "Litany of Exclusions."

More specifically, Civil Code Section 1633.3(c) excepts over 60 transactions from

designed to eliminate the single element of medium

"Subsections (a) and (b) [of Section 7] are

15 USC 7001 et seq.

ETA are not identical to their counterparts in UETA; these provisions are often referred to as "non-standard" or as differing from a "clean" version of UETA.

as a reason to deny effect or enforceability to a record, signature, or contract." UETA Section 7, In contrast, a number of provisions of Cal

See, e.g., Spect v. Netscape Communications Corp., 150 F. Supp. 2d 585 (S.D.N.Y. July 2001), and particularly the discussion of California case law on the subject.

Cal ETA that would not otherwise have been excepted if the NCCUSL model of UETA had been adopted without alteration.7 Virtually all of these involve consumer transactions with special or unique consumer protection concerns. NCCUSL's model excepts wills, codicils and testamentary trusts from UETA, in large part in recognition of the strength of the historical tradition that testamentary devise must be accomplished in a writing.8 UETA's model Section 3(b)(4) allows states to "identify" other laws excepted from UETA, and it is this Section (b)(4) that was used by California to include some 20 times the three exceptions NCCUSL contemplated.

Cal ETA's non-standard treatment in this area appears to have been prompted in large measure by a belief that consumers would be better protected if a written contract were used when the consumer were engaged in the specified types of transactions. This has led many in the legal community to believe that Cal ETA prevents the use of electronic contracts in a transaction of the type specified as "excluded." To the contrary, however, Section 1633.3(c) simply provides that Cal ETA "does not apply" in the excepted cases.

b. The Need for a Pre-Agreement to Agree.

A similar issue arises under Section 1633.5(b) of Cal ETA, which deals with the manner in which parties to a contract may "agree to conduct the transaction by electronic means." Under Section 1633.5, "[t]his title [that is, Cal ETA] applies only to transactions between parties each of which has agreed to conduct the transaction by electronic means." To that extent,

Section 1633.5(b) is identical to UETA Section 5(b). UETA Section 5(b) then provides a flexible test for determining whether the parties have agreed to conduct a transaction by electronic means: whether this is or is not so "is determined from the context and surrounding circumstances, including the parties' conduct." For example, agreement by the parties to conduct a transaction by electronic means could be established by the fact that the parties are "doing transactions electronically." UETA Section 5, Comment – 2.

Cal ETA's approach to the issue is more convoluted, requiring an "agreement to agree" of sorts before Cal ETA can apply. Under Section 1633.5(b), the parties can agree to conduct a transaction electronically using (a) a paper "separate and optional agreement the primary purpose of which is to authorize a transaction to be conducted by electronic means;" or (b) an electronic record. If an electronic record is used, then the agreement to conduct a transaction by electronic means may be a part of a "standard form contract," but the transaction can not be made conditional on an agreement to conduct the transaction electronically. Cal ETA thus appears only to apply if there is a paper based alternative to the transaction, since Section 1633.5(b) appears to require that both the "separate and optional agreement" and the "electronic record" alternative be optional.9 Some have read this to require Section 1633.5(b)'s "agreement to agree electronically" as a condition to entering into an electronic contract in California. However, this would again be an error; the failure to "agree to agree electronically" simply results in Cal ETA being inapplicable. It does not prevent the formation of an electronic contract.10

E-SIGN AS A SOLUTION.

If Cal ETA is inapplicable, where is the statutory clarification that was desired as regards electronic contract formation and the use of electronic records as evidence? The answer, of course, lies in the federal E-Sign Act. E-Sign provides as a matter of federal law that:

- "a signature, contract, or other record relating to…a transaction [in or affecting interstate or foreign commerce] may not be denied legal effect, validity or enforceability solely because it is in electronic form," and that
- "a contract relating to such transaction may not be denied legal effect, validity or enforceability solely because an electronic signature or electronic record was used in its formation."

There are limitations to the scope of coverage of E-Sign, such as that the transaction must involve interstate or foreign commerce.11 Where E-Sign does not apply, the difficulties in Cal ETA discussed above may act as a significant impediment to the desire for greater certainty regarding electronic contracts.12 Where E-Sign applies, it is possible to have an electronic contract that is free of challenge based on the electronic nature of the contract, signature or record, based on federal law. If so, whether Cal ETA applies or is inapplicable is irrelevant. So, for example, an electronic contract could be formed and have legal effect based on E-Sign, even if the transaction were one of those specifically excluded under Cal ETA Section 1633.3(b). Likewise, an

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Section 1633.3(c) accomplishes this by listing a number of citations to other California statutes and stating that "This title [that is, Cal ETA] does not apply to any specific transaction described in ... [the listed statutory citations]." A memorandum identifying and discussing each of the excluded statutory citations can be found at the Cyberspace Committee's internet Library, www.calbar.org/bus-law/cyberspace/library.htm, under the title "Memo re Senate Bill 820 – Transactions Excluded."

These exceptions are found at model form of UETA Section 3(b)(1) to 3(b)(3). Interestingly, NCCUSL did not except other agreements that have traditionally been subject to the statute of frauds: insurance, real property, and contracts of marriage.

optionality requirement as being met by giving the customer the right not to enter into the contract at all – to walk away. This would seem to render much of the language a nullity, however, since the parties always have the right to decline to enter into a contract.

This analysis of the relationship between E-Sign and Cal ETA is independent of federal preemption generally, and of the intricate "Exemption to Preemption" provisions of E-Sign Section 102 in particular. Where Cal ETA does not apply, there is no preemption issue.

Since we are dealing with "electronic" contracts, in most cases an interstate telecommunications carrier will be involved in the transmission of electronic records between the two parties, satisfying the Commerce Clause federal jurisdictional need. Questions could arise in privately maintained local-area networks, for example in employment matters. But this would seem the exception rather than the rule.

¹² E-Sign by its own terms does not apply, for example, to wills or testamentary trusts, adoption and divorce proceedings, cancellation of utility services, default or foreclosure of a consumer home loan, or cancellation of life or health insurance. E-Sign 103.

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electronic contract could be formed and have legal effect based on E-Sign, even if the parties to the transaction did not "agree to conduct transactions electronically" in the manner required under Cal ETA Section 1633.5. In both of these situations, Cal ETA by its own terms "does not apply." If Cal ETA does not apply, it only necessitates support for electronic contract formation from some area of law other than Cal ETA. E-Sign is capable of supplying this other area.¹³

Accordingly, with the advent of E-Sign, the existence or non-existence of Cal ETA is irrelevant for most electronic transactions in California. One little noticed but critical result is that E-Sign does not require a "paper" alternative. ¹⁴ Since E-Sign offers an alternative to Cal-ETA, for transactions covered by E-Sign there is no need for either party to concern itself that the other party has "agreed to conduct the transaction electronically," in the words of Cal ETA Section 1633.5(b). ¹⁵

Under E-Sign, the critical question will remain whether a contract has arisen, using standard contract formation touchstones: meeting of the minds, sufficient clarity of terms and conditions, consideration, etc. 16 Under E-Sign, there is no need for a preliminary "agreement to agree electronically," and in this manner E-Sign more closely follows historic contractual principals. For example, it has never been a common law predicate to contract formation that the two parties first agree whether an oral or a

written contract will be used to evidence the agreement; rather, the two parties simply entered into one or the other forms of contractual agreements and their choice was evidenced by the oral or written nature of the agreement. This same sequence results under E-Sign, but would not necessarily have been as natural or as easy a sequence and flow towards final agreement if Cal ETA 1633.5(b) were to apply.

SEVERAL INTERESTING ASPECTS OF E-SIGN

a. The Question of Attribution

One of the issues in electronic contract formation that remains unaddressed by either Cal ETA or E-Sign is that of attribution. An example will help illustrate the issue: suppose one were to receive an e-mail with an attached "request for proposal" that contains an offer to purchase home computers. The RFP is signed "ABC Company, Inc., by Dave Smith, President." Let's assume further that identity of the goods, pricing, delivery, payment and other terms, are sufficiently clear that acceptance of the offer will result in an enforceable contract. The "attribution question" is another way of asking the obvious: how certain is the recipient that ABC Company would actually be bound by any agreement that might result?

E-Sign does not create any specific presumptions in this regard.17 E-Sign does provide an electronic signature is an electronic sound, symbol or process "attached to or logically associated with" a contract or record. The first part of this question then becomes, did Dave Smith actually sign the RFP, or did someone send the RFP falsely in the name of Dave Smith. In many cases the need to "attach" or to "logically associate" may lead to the use of electronic tokens or codes issued by one party, or to reliance on asymmetric encryption programs available through a trusted third party such as a certification authority. In both these cases, there is the possibility of attribution with some certainty, depending on the nature and the degree of trust placed on the systems used, that Dave Smith is indeed the one who signed the RFP.

There remains, however, the second part of the question: whether Dave Smith as President of ABC Company is in fact authorized to bind ABC Company. In that sense, the use of electronic signatures to documents presents due authorization concerns that differ little if at all from the non-digital world. In connection with material transactions, it is not uncommon for parties to a contract to use Secretary's Certificates and opinions of counsel to bridge this factual divide, seeking assurances that due authorization to the execution and delivery of the contract has been obtained.

Market place developments are arising to assist in this regard, with certification authorities willing to attest to both the identity of a signature and to the capacity in which the person is acting.18 But for personto-person, business-to-person, or smaller business-to-business transactions, there may be an issue of attribution that is less easily overcome for remote parties. In some cases, the need for certainty of attribution may result in the creation of a set of paper documents that accompany the electronic contract. Such things as Secretary's Certificates, corporate resolutions and corporate authorizations may be combined in a preliminary paper document setting out both authorization to sign electronically and the security systems that will be used to authenticate an authorized signer.19

b. Consumer Consent To Disclosures (but not to Contracts)

The operative provisions of E-Sign do not specifically require some form of Continued on Page 31

Other areas of law do, in contrast. For example, Division 11 of the California Commercial Code attributes payment orders to a company if the recipient verifies the authenticity of the payment order using a commercially reasonable security procedure. Cal. Comm. Code 11202(b); see also 12 CFR 210.25(b).

It is not unexpected that the marketplace need is being met by depository financial institutions. Banks, for example, have historically provided endorsement guarantee services that inherently include guarantees of agency status. It is a logical extension to see banks and other depository institutions address these same informational risks in a virtual environment. For more information on how the federal bank regulatory authorities have dealt with this subject, see "Certification Authority Systems," OCC Bulletin 99-20 (May 4, 1999).

Oddly, this may result in something like Cal ETA's "agreement to conduct transactions electronically."

¹³ As a technical matter, it is also true to say that the common law dealing with contracts (as modified by California statutes other than Cal ETA) could equally supply the supporting "other law."

There are provisions in E-Sign that require consent, but these are limited to disclosures and even then only in connection with consumer transactions. See E-Sign 101(c)(5), discussed below.

¹⁵ Cal. Civ. Code 1633.5(b).

In effect, California law governing contract formation continues to apply, without reference to Cal ETA. Thus, the provisions of Civ. Code 1622, supplemented by case law, remain a benchmark for determining if a contract has been formed. If formed, E-Sign tells us only that the electronic nature of the contract cannot be used to challenge its legal efficacy.

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consent to the use of electronic means. Section 101(b)(2) of E-Sign makes it clear that E-Sign does not result in any necessity or requirement that any person agree to use or accept electronic records or electronic signatures. Thus, it is perfectly possible for a person to refuse to conduct transactions electronically. However, in contrast to Cal ETA, there is not a general prerequisite under E-Sign that the parties to an electronic transaction exhibit some agreement to conduct a transaction electronically that is independent of the transaction itself.

But there is one area where consent is required: consumer disclosures. Section 101(c) of E-Sign addresses this area. Information may be provided or made available to consumers through the use of an electronic record, and doing so will satisfy any requirement under any statute, regulation or other rule of law, that the information be in writing. However, there are limitations on the ability to provide electronic disclosures to consumers. Section 101(c)(1) contains the following restrictions, among others:

- First, the consumer must have affirmatively consented to the use by the other party of electronic records to provide or make available the required information, and the consumer must not have withdrawn that consent. Note that this requires the disclosing party to maintain a system for monitoring whether a withdrawal of consent has occurred.
- Second, the consumer must have received specified disclosures prior to consenting.²¹ These include informing the consumer how the consumer may obtain a paper copy of the electronic record, and any fees the consumer may be charged.²² Note that this requires the disclosing party to make a

paper disclosure option available to the consumer, but allows the disclosing party to charge the consumer for this as long as the fee is disclosed.²³

- Third, the consumer must be informed of the hardware and software requirements for access to the disclosure information. The consumer must consent to the use of electronic records, or confirm his or her consent, in a manner that "reasonably demonstrates" the consumer can access the information.24 This requirement is thought to be a significant protection against consumer mistake or abuse of the consumer, by establishing that no consumer will receive electronic disclosures except after the consumer has demonstrated that he or she has and can operate the systems (hardware and software) that are required to receive the disclosures. The disclosing party is not required to engage in any further verification of the consumer's capabilities.
- Fourth, if the hardware or software requirements are changed after consent, the consumer must receive a revised disclosure of the new requirements and a resolicitation of the consumer's consent.²⁵

There are several interesting observations that one can make in connection with these requirements. On a general level, it is interesting to note that the requirement for consumer consent arises solely under Section 101(c), and in connection with agreement to allow electronic records to be used to meet consumer disclosure requirements. This is distinct from E-Sign Section 101(a)'s general rule that a signature, contract or other record cannot be denied legal validity simply because it is in electronic form. No specific consent to the use of an electronic record is needed, therefore, as a condition to allowing an electronic contract to arise

Another interesting feature of E-Sign

101(c) involves the question of changes in terms, and specifically changes in fees charged for paper disclosures. It appears that the terms given to the consumer as part of the initial consent process may be changed through redisclosure. ²⁶ This would allow the amount of the fee to be modified after initial consent. The disclosing party may, therefore, wish to retain the ability to modify the fee structure, possibly specifying how the consumer might be notified of changes in this (and other) disclosure items.

c. Additional Self-Serving Protective Measures.

Some minor modification to the way in which electronic communication occurs may be worthwhile, given the advent of E-Sign. The term "electronic" includes electrical, digital, magnetic, wireless, optical, electromagnetic or similar capabilities. E-Sign 106(2). Telephone conversations, email, PowerPoint slides and microwave broadcasts would thus all be "electronic," and could result in electronic signatures. Given that contracts might arise due to the give and take of e-mail, it is becoming more and more common to see disclaimers that require specific intent to contract before an electronic contract may arise. Thus, for example, e-mail may more and more often contain a recitation that "No contracts may be concluded on behalf of the sender by means of electronic communications unless expressly stated to the contrary." This would, it is assumed, prevent a contract from arising unexpectedly.

The issue may be more sensitive to some industries than others. For example,

²⁰ E-Sign 101(c)(1)(A).

E-Sign 101(c)(1)(B).

²² E-Sign 101(c)(1)(B)(iv).

²³ E-Sign does not cap or limit the charge that can be imposed.

⁴ E-Sign 101(c)(1)(C).

²⁵ E-Sign 101(c)(1)(D).

One might look for support at Section 101(c)(1)(C)'s requirement that the consumer receive a disclosure of the hardware and software requirements for access to the disclosure information. If these requirements are changed, the consumer must receive a revised disclosure of the new requirements and a resolicitation of the consumer's consent without. This stautory scheme does not prohibit changing the initial disclosure; rather, it contemplates that the initial disclosure may be changed, and adds consumer protection measures to address specific types of changes (hardware and software requirements). Other changes, for example fees, would appear to be a matter of contract between the consumer and the disclosing party, since there are no specific consumer protection measures applicable to other changes in the initial disclosure.

during the 1980's it was not uncommon for commercial lenders to fret when faced with claims that they had contractually agreed to terms and conditions of a loan agreement, and were thus required to disburse under a credit, notwithstanding the lender had not reached a final internal determination on an application. The basis for the claim often lay in the idea that oral negotiations had reached a sufficient level of clarity as to terms and conditions that - when accompanied by a change in position by the applicant (read, "consideration") - an enforceable agreement had been reached. Banks and other lenders in California responded in part by seeking legislative protection, which was granted when the California Statute of Frauds was amended to require a "writing" as a condition to commercial loan contracts if the amount of a loan exceeded \$100,000.27 With the advent of E-Sign, a "writing" could arise for purposes of any law, including in the e-mail of a commercial lending officer.

d. Current Legislative Trends.

Recently the California Legislature began action that would change much of Cal ETA, at least insofar as the issues discussed above. SB 97 passed the Senate on a 25 to 14 vote January 30th, and currently is being considered by the Assembly. In relevant part, a proposed new Section 1634.5 seeks to reintroduce the need for electronic agreement or a separate and optional written agreement for consumer transactions, and to do so in a way that is a substantive requirement rather than a condition to the application of Cal ETA.28 There are clear preemption questions raised by SB97's efforts in this regard. E-Sign clearly preempts state laws of this sort to the extent that that an electronic record is invalidated based solely on the electronic nature of the record. On the other, some will argue that any new Section 1634.5 addresses contract formation issues alone, an area where E-Sign's preemption rules are less clear.



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address from which queries are sent.²⁴ For example, in order to circumvent eBay's Botblocking mechanism, BE sent its Spiders' queries through proxy servers, making it more difficult for eBay to trace to the originating IP address in order to block such suspicious and invasive queries.²⁵

A technologically more efficient, but still non-comprehensive solution, is the Standard for Robot Exclusion ("SRE"), which entails the insertion of a "robots.txt" file into the root directory of a server that specifies the server's access policy for Bots.26 Cooperating Bots visiting the server are instructed to read the .txt file in order to learn the areas of the website that are off limits and the maximum volume of queries that are acceptable. The file name "robots.txt" is designed to fit the file naming restrictions of all common operating systems, indicate the purpose of the file, minimize the likelihood of a clash with existing files and be relatively easy for Bot proprietors to achieve compliance.27 Nonetheless, no regulatory or legal system currently ensures that Bot proprietors will actually program their Bots to search for such "robot.txt" files, comprehend such files or comply with their access policies. Therefore, the use of a voluntary, industry based standard is not by itself sufficient to achieve acceptable compliance. In fact, eBay's access policy, set forth in such a SRE, was simply disregarded as the BE Bots were simply not programmed to respect such rules.28

THE EMERGING LEGAL FRAME-WORK

Absent formal regulations, technological solutions alone cannot adequately deter the more invasive uses of Bots. As a result, many disputes arising from the problematic uses of Bots have been the subject of litigation. Courts have labored to fit such cases

within the bounds of existing legal frame-works. ²⁹ In deciding the cases to date, some Courts have focused on protecting the content being searched and indexed by Bots, while others have centered on whether the use of Bots may create a potentially harmful effect on the ability of the target websites' servers to function at an optimal level. ³⁰ As no single area of the law has proven a perfect fit for the issue of Bots, Courts have addressed several legal theories in an effort to reason towards a fair outcome in each case.

COPYRIGHT LAW

Existing legal doctrines are not well suited to protect the databases most commonly accessed by Bots.³¹ Copyright law, for example, is focused upon the protection of original works fixed in a tangible medium of expression and not unoriginal factual compilations. Although U.S. law does provide limited copyright protection for the creative selection and arrangement of facts in a database, most of the information searched and indexed by Bots on the Web is simply logically arranged and merely constitutes an unoriginal factual compilation.³²

One possible legal theory which website own-

³² See generally, Ian C. Ballon, Bots, Screen Scraping, Content Aggregation and the Evolving Doctrine of Database Trespass, Vol. 6, no. 3 Cyberspace Lawyer 15 (May 2001).

uct and pricing information as part of a compara-

tive shopping website.

²⁷ Cal. Civ. Code 1624(7).

See SB 97 and proposed Civ. Code Section 1634.5, available at www.leginfo.ca.gov/pub/bill/sen/sb_0051-0100/sb_97_bill_20020116_amended_sen.html.

⁴ Kaplan, supra note 14.

²⁵ eBay, supra note 15, at 1062-1063.

See generally, SRE, supra note 5; Middle-brook & Muller, supra note 1, at 345, 364-365.

²⁷ See Middlebrook & Muller, supra note 1.

eBay, supra note 15, at 1062-1063.

See generally, O'Rourke, supra note 9. See Middlebrook & Muller, supra note 1.

ers could invoke to deter invasive Bots is misappropriation. In the 1918 landmark case of International News Service v. Associated Press (248 U.S. 215 (1918)), the Supreme Court set forth the claim of misappropriation to allow plaintiff news company legal redress against a competing news agency that simply copied and used time-sensitive news reports gathered by the plaintiff. For a misappropriation claim to stand and avoid preemption under copyright law, the following requirements must be met: (i) a plaintiff must generate or gather information at a cost; (ii) the information must be time-sensitive; (iii) a defendant's use of the information must constitute free riding on the plaintiff's efforts; (iv) the defendant must be in direct competition with a product or service offered by the plaintiff and (v) the ability of other parties to free ride on the efforts of the plaintiff or others must so reduce the incentive to produce the product or service that its existence or quality is substantially threatened. However, most websites seeking to legally enjoin Bots from indexing their collection of facts will likely fail to show that the information at hand is time-sensitive. Unlike sports scores and hot news, the value of search results lies in their relevance, breadth and reliability and almost certainly lasts for longer than a brief period of time. Moreover, many e-commerce websites likely do not suffer any loss when a ShopBot indexes their prod-